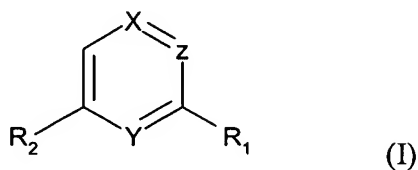


What is claimed is:

1. A compound of the formula (I):



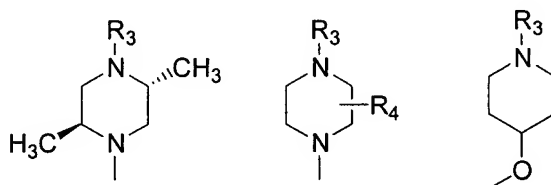
wherein

(i) X and Z represent both CH and Y represents nitrogen, forming a pyridine derivative, or

(ii) X represents C-CF₃, Z represents CH, and Y represents nitrogen, forming a 4-trifluoromethylpyridine derivative, or

(iii) Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative, and

wherein R₁ and R₂ are each, independently, selected from a group A consisting of



or from a group B, consisting of aryl-C₁-C₆-alkyl, aryl-C₁-C₆-alkoxy, heteroaryl-C₁-C₆-alkoxy, aryloxy-C₂-C₆-alkoxy, heteroaryloxy-C₂-C₆-alkoxy, 1-indanyloxy, 2-indanyloxy, aryloxy, heteroaryloxy, arylthio, heteroarylthio, C₅-C₆-cycloalkylthio, C₅-C₈-alkoxy, C₅-C₈-alkylthio, C₃-C₆-alkynyloxy, C₃-C₆-alkenyloxy, fluoro-C₂-C₄-alkoxy, C₄-C₈-cycloalkyloxy, C₃-C₈-cycloalkyl-C₁-C₄-alkoxy, halogen, aryl-C₁-C₄-alkylthio, heteroaryl-C₁-C₄-alkylthio, aryl-C₁-C₄-alkylamino, heteroaryl-C₁-C₄-alkylamino, heteroaryl and aryl;

with the proviso that:

(i) R₁ and R₂ are different and are not both selected from group A or group B at the same time;

(ii) when both X and Z are CH and Y is N in formula (I), forming a pyridine derivative, and R₁ is 1-piperazinyl or 4-methylpiperazin-1-yl, then R₂ is other than 2-phenylethyl, benzyloxy, benzylamino, phenylthio, phenoxy, substituted phenoxy, C₄-C₈-cycloalkyloxy and C₃-C₈-cycloalkylmethoxy;

5 (iii) when X is CH and Z and Y both are nitrogen in formula (I), forming a pyrimidine derivative, and R₂ is 1-piperazinyl, then R₁ is other than phenoxy, phenyl or phenyl substituted by bromo, and C₅-C₈ alkoxy; and when R₂ is 4-methylpiperazin-1-yl or 4-(2-hydroxyethyl)piperazin-1-yl, then R₁ is other than 5-nitro-2-furyl;

(iv) when X is CH and Z and Y both are nitrogen in formula (I), forming a
10 pyrimidine derivative, and R₁ is 1-piperazinyl, then R₂ is other than C₅-C₈ alkoxy; and where R₃ is H or C₁₋₄-alkyl, allyl, 2-hydroxyethyl, 2-cyanoethyl, or a nitrogen protecting group, or a prodrug moiety;

R₄ is hydrogen, or C₁₋₄ alkyl;

and wherein any aryl or heteroaryl residue, alone or as part of another group, in R₁ or R₂
15 may be independently substituted in one or more positions, by C₁₋₄-alkyl, C₁₋₄-alkoxy, C₁₋₄-alkylthio, C₂₋₄-acyl, C₁₋₄-alkylsulphonyl, cyano, nitro, hydroxy, C₂₋₆-alkenyl, C₂₋₆-alkynyl, fluoromethyl, trifluoromethyl, trifluoromethoxy, halogen, -N(R₅)(R₆), aryl, aryloxy, arylthio, aryl-C₁₋₄-alkyl, aryl-C₂₋₄-alkenyl, aryl-C₂₋₄-alkynyl, heteroaryl, heteroaryloxy, heteroarylthio or heteroaryl-C₁₋₄-alkyl, aryl-C₁₋₄-alkoxy, aryloxy-C₁₋₄-
20 alkyl, dimethylamino-C₂₋₄-alkoxy; and

wherein any aryl or heteroaryl residue as substituents on aryl or heteroaryl, alone or as part of another group, in R₁ or R₂ in turn may be substituted in one or more positions, independently of each other by C₁₋₄-alkyl, C₁₋₄-alkoxy, halogen, trifluoromethyl, cyano, hydroxy or dimethylamino; and

25 R₅ and R₆ independently of each other are hydrogen, methyl or ethyl, or together with the nitrogen atom to which they are bound form a pyrrolidine, piperazine, morpholine, thiomorpholine or a piperidine ring;

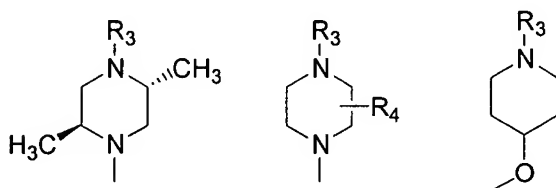
and pharmaceutically acceptable salt, hydrate, geometrical isomer, tautomer, optical isomer, *N*-oxide or prodrug form thereof.

2. The compound according to claim 1, wherein X and Z represent both CH
5 and Y represents nitrogen, forming a pyridine derivative.

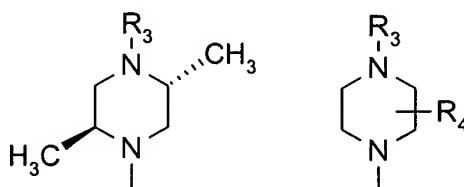
3. The compound according to claim 1, wherein formula (I) represents a 4-trifluoromethylpyridine derivative.

10 4. The compound according to claim 1 wherein Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative.

5. The compound according to claim 1 wherein R₃ is hydrogen and R₁ or R₂
is selected from

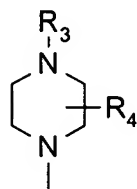


6. The compound according to claim 1 wherein R₁ or R₂ is selected from



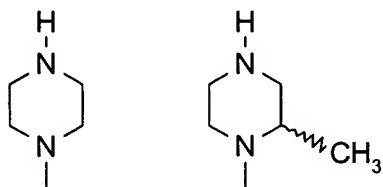
and where R₃ is hydrogen and R₄ is selected from hydrogen, methyl or ethyl.

7. The compound according to claim 1 wherein R₁ or R₂ is



and where R₃ is hydrogen and R₄ is selected from hydrogen, methyl or ethyl.

8. The compound according to claim 1, wherein R₁ or R₂ is selected from



5

9. The compound according to claim 1, which is selected from the group consisting of:

- 10 4-(Benzyloxy)-2-(1-piperazinyl)pyrimidine,
 4-[(2-Methoxybenzyl)oxy]-2-(1-piperazinyl)pyrimidine,
 2-{[3-(Benzyloxy)benzyl]oxy}-4-(1-piperazinyl)pyrimidine,
 and their pharmacologically acceptable salts and solvates.

- 15 10. A pharmaceutical composition comprising a compound according to claim 1 as an active ingredient, together with a pharmaceutically acceptable carrier.

11. A method for the prophylaxis or treatment of a serotonin-related medical condition, comprising administering to a subject in need thereof a therapeutically
 20 effective amount of a compound according to claim 1.

12. The method according to claim 11, wherein the medical condition is related to the 5-HT_{2C} receptor.

13. The method according to claim 11 wherein the medical condition is an eating disorder.

14. The method according to claim 11, wherein the medical condition is
5 obesity.

15. The method according to claim 11, wherein the medical condition a memory disorder.

10 16. The method according to claim 11, wherein the medical condition is a mood disorder.

17. The method according to claim 11, wherein the medical condition is an anxiety disorder.
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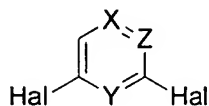
18. The method according to claim 11, wherein the medical condition is selected from sexual dysfunctions, epilepsy and urinary disorders.

19. The method according to claim 11, wherein the medical condition is pain.
20

20. The method according to claim 11, wherein the medical condition is substance abuse.

21. The method according to claim 11, wherein the medical condition is
25 schizophrenia.

22. A method of making a compound of claim 1, taking a compound of the following formula:



wherein

(i) X and Z represent both CH and Y represents nitrogen, forming a pyridine derivative, or

5 (ii) X represents C-CF₃, Z represents CH, and Y represents nitrogen, forming a 4-trifluoromethylpyridine derivative, or

(iii) Y and Z represent both nitrogen and X represents CH, forming a pyrimidine derivative, and wherein

each Hal is independently a halogen;

10 and reacting the compound with one or more chemical reagents in one or more steps to produce a compound of claim 1.

23. A method of modulating serotonin in a subject comprising administering to the subject an effective amount of a compound of claim 1.

24. A method of modulating 5-HT_{2c} in a subject comprising administering to the subject an effective amount of a compound of claim 1.

25. The compound according to claim 1, wherein R₃ is an acyl- or alkoxycarbonyl group forming a cleavable amide or carbamate linkage.